

What Is Claimed:

1. A filtering system for filtering intake water of a water intake system, the filtering system comprising:
 - 5 a water intake system comprising a plurality of inlets in fluid communication with a water intake pump; and
 - a containment/exclusion boom comprising:
 - (i) a support system positioned in a body of water,
 - (ii) a curtain connected to the support system and comprising a
10 sheet of flexible fabric material that allows movement of water therethrough, the curtain extending substantially the entire depth of the body of water;wherein the curtain surrounds substantially all of the plurality of inlets and wherein, upon operation of the water intake pump, water is drawn through the curtain at which
15 time the water is filtered, and subsequently filtered water is drawn through the plurality of inlets for delivery into the water intake system.
2. The filtering system according to claim 1 wherein the sheet of flexible fabric material is a geosynthetic fabric.
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3. The filtering system according to claim 1 wherein the curtain comprises two sheets of flexible fabric material.
4. The filtering system according to claim 3 further comprising:
25 a gas injection system comprising a source of compressed gas in fluid communication with at least one outlet positioned between the two sheets of flexible fabric material.

5. The filtering system according to claim 4 wherein the curtain includes a plurality of panels each defined by the two sheets of flexible fabric being connected together substantially from the lower end to the upper end of the curtain, the plurality of panels being spaced along the length of the curtain.

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6. The filtering system according to claim 5 wherein the gas injection comprises a plurality of outlets each in fluid communication with the compressed gas source, with one or more of the plurality of outlets being positioned between the two sheets of flexible fabric for each of the plurality of panels.

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7. The filtering system according to claim 1 wherein the support system comprises:

a plurality of pilings extending upwardly out of the body of water and

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a floating structure connected to the plurality of pilings, the floating structure covering the area of the body of water contained by the curtain.

8. The filtering system according to claim 7 further comprising:
a collar surrounding each of the plurality of pilings and being
vertically adjustable along the length of the piling, with the floating structure being
connected to the collar.

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9. The filtering system according to claim 7 wherein the plurality of pilings are formed in a single row.

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10. The filtering system according to claim 9 wherein the floating structure comprises:

a pair of floating pipes spaced apart from one another, a plurality of struts spanning between the pair of floating pipes, and a covering material that encloses the region between the pair of floating pipes.

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11. The filtering system according to claim 10 wherein the covering material is a non-weight bearing cover.

12. The filtering system according to claim 7 wherein the plurality of pilings are formed in a two substantially parallel rows.

13. The filtering system according to claim 7 wherein the floating
5 structure comprises:

a first portion of the floating structure connected to one row of the plurality of pilings and

a second portion of the floating structure connected to another row of the plurality of pilings.

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14. The filtering system according to claim 13 wherein the first and second portions of the floating structure are spaced apart, the floating structure further comprises:

a covering material that encloses the region between the first
15 and second portions of the floating structure.

15. The filtering system according to claim 14 wherein the covering material is a non-weight bearing cover.

16. The filtering system according to claim 13 wherein the first and second portions comprise weight-bearing surfaces.

17. The filtering system according to claim 1, wherein the fluid delivery system comprises:

25 an elongate main collector conduit in fluid communication with the water intake pump and

a plurality of primary intake conduits in communication with the main collector conduit, each of the plurality of primary intake conduits comprising one inlet.

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18. The filtering system according to claim 17, wherein the plurality of primary intake conduits are spaced apart along the length of the main collector conduit.

19. The filtering system according to claim 18, wherein the plurality of primary intake conduits are substantially equi-spaced along the length of the main collector conduit.

5 20. The filtering system according to claim 1 wherein the support system comprises a plurality of flotation units.

21. The filtering system according to claim 20 wherein the upper
10 end of the curtain comprises a sleeve in which is received the plurality of flotation units.

22. The filtering system according to claim 21 wherein the curtain
comprises two sides, each side being formed of two sheets of flexible fabric material
and including a plurality of panels each defined by the two sheets of flexible fabric
15 being connected together substantially from the lower end to the upper end of the
curtain, the plurality of panels being spaced along the length of each side of the
curtain.

23. The filtering system according to claim 1 wherein the
20 containment/exclusion boom is submerged.

24. A combination boat dock and water filtering system comprising
the water filtering system according to claim 1, wherein the support structure is in the
form of a boat dock.

25. A method of filtering water entering a water intake system comprising:

providing a water delivery system comprising a plurality of inlets in a body of water that are in fluid communication with a water intake pump;

5 installing a containment/exclusion boom into the body of water in a manner surrounding substantially all of the plurality of inlets, the containment/exclusion comprising:

(i) a support system,

10 (ii) a curtain connected to the support system and comprising a sheet of flexible fabric material that allows movement of water therethrough, the curtain extending substantially the entire depth of the body of water; and

drawing water through the water delivery system, whereby water entering the water delivery system is drawn through the curtain, thereby
15 filtering the water, prior to passing through the plurality of inlets for delivery into the water delivery system.